

**REMARKS**

Claims 1 -15 are currently pending in the application. Claims 1- 15 are rejected under 35 U.S.C. § 103(a).

**Amendments**

Applicants have amended claims 1 and 10 to replace the term "actuated" with the term "moved." This amendment is supported *inter alia* at pages 2 and 6 of the specification.

Thus, no new matter has been added.

**Rejections Under 35 U.S.C. § 103(a)**

Examiner has rejected Claims 1 to 15 under 35 U.S.C. § 103(a) as obvious over various references. Applicants respectfully traverse these rejections and request reconsideration.

M.P.E.P. § 2143 states that in order to establish a *prima facie* case of obviousness three basic criteria must be met. First there must be some suggestion or motivation in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference(s) must teach all of the claim limitations. "The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the in the prior art, not in the applicant's disclosure." *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991).

Applicants respectfully submit that Examiner has failed to establish any of the three requirements for a case of *prima facie* obviousness. The cited references do not teach each and every limitation of the claimed invention. Further, there is no motivation to combine or reasonable expectation of success for the suggested combination to be found in either the references themselves or the knowledge generally available in the art.

**i. Rejection of Claims 1 to 9**

The Examiner has rejected Claims 1 to 9 as obvious over U.S. Patent 5,587,062 to Togawa *et al.* (Togawa) in view of Published PCT application WO90/11876 to Carr *et al.* (Carr). Applicants respectfully submit that Claims 1 to 9 cannot be obvious over Togawa and Carr, either alone or in combination for the following reasons. First, because Togawa and Carr are from non-analogous arts, it is improper for Examiner to combine their teachings. Second, even if Togawa and Carr were from analogous arts it is still improper to combine them as Examiner has done, since such a combination would change the principle of operation of Carr. Claim 1 is the independent claim.

Claim 1 recites a sample taking apparatus arranged for receiving a plurality of samples from a support material. The apparatus comprises a plurality of separation tools for taking samples of the support material. The separation tools are arranged on a holding device and are provided with separate actuating means by which the separation tools can be separately controlled and moved.

Togawa discloses a sample collection apparatus for sampling portions of a gel electrophoresis plate. The sample collection apparatus disclosed by Togawa has a single cutting tool for removing samples from a gel electrophoresis plate. Thus, Togawa by itself does not teach a plurality of separation tools which can be separately controlled and moved.

Carr discloses a punch assembly for punching holes in flexible photopolymer sheeting. The assembly disclosed by Carr includes multiple punches for producing regularly spaced holes in photopolymer films. The punch assembly disclosed by Carr is obviously directed towards the production of polymer sheeting where the spacing of holes at regular intervals along the edge of the film needs to be highly accurate for the purpose of rolling such films. (See Carr, pp. 1-2).

It is Examiner's contention that it would have been obvious to one having ordinary skill in the art to combine the teachings of Togawa and Carr to arrive at the invention recited in Claim 1. Applicants respectfully submit that Examiner is mistaken, as it is improper to combine Carr with Togawa since Carr is from a non-analogous art. "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor, or if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). Both Togawa and the invention recited in Claim 1 relate to the field of sampling gel separation plates, such as gel electrophoresis. Carr on the other hand relates to the field of punching regularly spaced holes on photopolymer films. Even though all three may include the element of a pneumatically driven tool, they cannot be considered to be within the same field of endeavor merely on this basis. See *In re Clay*, 966 F.2d 656, 23 USPQ2d 1058 (Fed. Cir. 1992) (The court found that a reference related to using a gel to improve the *extraction* of petroleum from underground reserves was not in the same field of endeavor as claims in application related to *storage* of refined hydrocarbons in man-made storage tanks, even though both related to the petroleum industry). Similarly, to define the field of the Applicants' endeavor as pneumatically driven tools is overly broad.

Further, the problem addressed by Carr is not pertinent to the problem addressed by the invention of Claim 1 or the apparatus disclosed by Togawa. "If a reference has the same purpose as the claimed invention, the reference relates to the same problem, and that fact supports use of that reference in an obviousness rejection." *Id.* The invention recited in Claim 1 is concerned with the problem of sampling a polymer support material, such as that used in gel electrophoresis at specified locations. The device disclosed by Carr is concerned with the problem of ensuring that holes punched in photopolymer films are clean and are regularly spaced. In sampling gel separation plates a small portion of a separation gel

containing an analyte of interest is removed from a location determined by the separation technique used. The device disclosed by Carr on the other hand punches completely through a uniform sheet of photopolymer at regular intervals. This is a completely different problem than that faced by Applicants.

Further, the Examiner has provided no rationale for combining Togawa and Carr.

"There are three possible sources of motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art." *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998).

As shown above, the problem solved by the invention of Claim 1 is fundamentally different from the problem addressed by Carr. Further, Togawa and Carr contain no motivation to combine their teachings as they each relate to different fields of endeavor. Togawa contains no indication of the possibility of using more than one cutting tool. Carr contains no teaching that its disclosed device can be used for anything other than punching holes at regular predetermined intervals. Further, where the device of Carr makes use of more than one punching tool, those punching tools are always used simultaneously and are not separately controlled or moved.

The Examiner's only source of motivation to combine Togawa and Carr as the Examiner has done is found in the Applicants' disclosure. "The combination of elements from non-analogous sources, in a manner that reconstructs the applicant's invention only with the benefit of hindsight, is insufficient to present a *prima facie* case of obviousness." *In re Oetiker*, 977 F.2d at 1447, 24 USPQ2d at 1446. The Examiner has used impermissible hindsight to selectively choose and combine individual components from both Togawa and Carr to construct the invention of Claim 1 where neither Togawa nor Carr provide any guidance or motivation to combine them in the way that Examiner has.

In addition, combining Togawa and Carr in the way suggested by Examiner would change the fundamental principle of operation of Carr. M.P.E.P. §2143.02 states that, "[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. See *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). In the invention of Carr, the punches are intended to be used simultaneously to repeatedly punch regularly spaced holes in photopolymer film. Even where a single punch is used, that punch is used repeatedly to perform the same function. In order to modify Carr to arrive at the invention of Claim 1, it would be necessary to modify Carr such that its punches would be actuated individually and in sequence. In addition, Carr would have to be modified such that its punches would not be spaced at regular intervals. This is entirely contrary to the concept of Carr. Applicants therefore respectfully submit that the proposed combination of Togawa and Carr is improper.

Applicants respectfully submit that Claim 1 cannot be obvious over the combination of Togawa and Carr for the reasons stated above. Likewise, Applicants respectfully submit that Claims 2 to 9 also cannot be obvious over the combination of Togawa and Carr. Reconsideration is respectfully requested.

**ii. Rejection of Claims 10 to 13**

Examiner has further rejected Claims 10 to 13 under 35 U.S.C. § 103(a) as obvious over Togawa and Carr. Applicants respectfully submit that Claims 10 to 13 cannot be obvious over Togawa and Carr, either alone or in combination for the following reasons. Claim 10 is the independent claim.

Claim 10 recites a method for cutting samples from a support material and transferring the samples onto a target substrate. The method comprises cutting the samples using a sample taking apparatus having a plurality of separation tools. The separation tools

are separately controlled and moved. The samples are transferred onto the target substrate simultaneously and in parallel.

For the same reasons recited above, Applicants respectfully submit that the rejection of Claim 10 over the combination of Togawa and Carr is improper.

In addition, it is respectfully submitted that the combination of Togawa and Carr cannot function in the way recited in Claim 10. Carr discloses that the pneumatic punches in the device it discloses can be operated individually. (See Carr, pp. 3-4). However, where the device of Carr uses only a single punch, that punch is used repeatedly to punch holes at regular intervals in a photopolymer film, with the waste material being expelled after each punch. Nowhere does Carr disclose that its punches can be individually actuated in sequence, thereby taking a plurality of samples that can be transferred to a substrate in parallel. Therefore, Togawa and Carr do not disclose each and every element recited in Claim 10.

Applicants therefore respectfully submit that Claim 10 cannot be obvious over the combination of Togawa and Carr. Likewise, Applicants respectfully submit that Claims 11 to 13 cannot be obvious over the combination of Togawa and Carr. Reconsideration is respectfully requested.

**iii. Rejection of Claim 14**

Examiner has further rejected Claim 14 as obvious over the combination of Togawa and Carr, further in view of either U.S. Patent 5,993,627 to Anderson *et al.* (Anderson) or published European Patent Application EP 0 810 438 A2 to Pelc *et al.* (Pelc).

Applicants respectfully submit that Claim 14 cannot be obvious over the combination of Togawa, Carr and either Anderson or Pelc for the following reasons.

Anderson discloses an automated system for high throughput two dimensional electrophoresis. The apparatus disclosed by Anderson has a single sampling cutter for excising plugs of material from a gel slab. Nowhere does Anderson disclose a device having

multiple punches that can be controlled and moved separately. Therefore Anderson does not cure the fundamental deficiencies of the combination of Togawa and Carr discussed above.

Pelc discloses a liquid handling system for transferring microvolumes of an analyte fluid. On this basis alone the combination proposed by Examiner is improper as Togawa, Carr and Pelc are from non-analogous arts. Nonetheless, the plurality of microdispensers disclosed by Pelc are controlled and moved simultaneously. Nowhere does Pelc disclose a device having multiple punches or sampling tools that can be controlled and moved separately. Therefore, Pelc does not cure the fundamental deficiencies of the combination of Togawa and Carr discussed above.

Applicants therefore respectfully submit that for the same reasons discussed above with respect to Claims 1 to 13, that Claim 14 cannot be obvious over the combination of Togawa, Carr and either Anderson or Pelc. Reconsideration is respectfully requested.

**iv. Rejection of Claim 15**

Examiner has further rejected Claim 15 as obvious over the combination of Togawa and Carr, further in view of published British Patent Application GB 2 067 126 A to Brun *et al.* (Brun).

Applicants respectfully submit that Claim 15 cannot be obvious over the combination of Togawa, Carr and Brun for the following reasons.

Brun discloses an apparatus for forming openings in a gelatinous material in a Petri dish. In the apparatus disclosed by Brun a Petri dish containing a gelatinous substance is lifted towards a punch tool, which removes a pellet from the gel. In one embodiment the device may have up to three punches, which are all, used simultaneously. However, in all cases it is the Petri dish that is moved, not the punch tool(s). Nowhere does Brun disclose a device having multiple punches or sampling tools that can be controlled and moved

separately. Thus, Brun does not cure the fundamental deficiencies of the combination of Togawa and Carr discussed above.

Applicants therefore respectfully submit that for the same reasons discussed above with respect to Claims 1 to 13, that Claim 15 cannot be obvious over the combination of Togawa, Carr and Brun. Reconsideration is respectfully requested.

**v. Rejection of Claims 1-3, 5, 6, 8 and 9**

Examiner has further rejected Claims 1 to 3, 5, 6, 8 and 9 as obvious over the combination of Togawa and Pelc.

Applicants respectfully submit that Claims 1 to 3, 5, 6, 8 and 9 cannot be obvious over the combination of Togawa and Pelc for the followings reasons.

As discussed above, Togawa discloses an apparatus for sampling a gel electrophoresis plate. The apparatus disclosed by Togawa has only a single cutting tool. Pelc discloses a fluid handling system for dispensing microvolumes of fluid. On this basis alone the combination proposed by Examiner is improper as Togawa and Pelc are from non-analogous arts. Nonetheless, nowhere does Pelc disclose a plurality of separation tools that can be separately controlled and moved. The plurality of microdispensers disclosed by Pelc are controlled and moved simultaneously. Therefore, it is respectfully submitted that the combination of Togawa and Pelc does not teach each and every limitation of Claim 1. As a result, Applicants respectfully submit that Claim 1 cannot be obvious over the combination of Togawa and Pelc. Additionally, since Claims 2, 3, 5, 6, 8 and 9 all depend from Claim 1, it is respectfully submitted that none of these claims can be obvious over the combination of Togawa and Pelc. Reconsideration is respectfully requested.

**vi. Rejection of Claims 10 to 15**

Examiner has further rejected Claims 10 to 15 as obvious over the combination of Togawa and Pelc.



Applicants respectfully submit that Claims 10 to 15 cannot be obvious over the combination of Togawa and Pelc for the same reasons recited above with respect to Claims 1 to 3, 5, 6, 8 and 9. Reconsideration is respectfully requested.

**CONCLUSION**

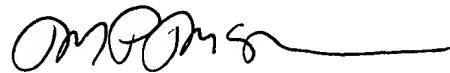
Applicants believe that the foregoing amendments and remarks have overcome or rendered moot all grounds for rejection or objection. There being no other rejections or objections, Applicants believe that the application is in a condition for allowance. Applicants therefore respectfully request prompt action on the claims and allowance of the application. If the Examiner believes that personal communication will expedite prosecution of the application, the Examiner is invited to telephone Applicants' undersigned agent directly.

**AUTHORIZATION**

Applicants believe that no extension of time is required to make submission of this response timely. However, in the event that an extension of time is required, Applicants hereby submit a petition for such extension of time as may be necessary to make this response timely. The Commissioner is hereby authorized to charge the necessary fees to deposit account No. 502194. A duplicate of this authorization is enclosed.

Respectfully Submitted,

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